

We Claim:

1. A purified polynucleotide or fragment thereof derived from a CS193  
5 gene, wherein said polynucleotide is capable of selectively hybridizing to the nucleic  
acid of said CS193 gene and has at least 50% identity to a sequence selected from the  
group consisting of SEQUENCE ID NOS 1-18, and fragments or complements  
thereof.
- 10 2. The purified polynucleotide of claim 1, wherein said polynucleotide is  
produced by recombinant techniques.
3. The purified polynucleotide of claim 1, wherein said polynucleotide is  
15 produced by synthetic techniques.
4. The purified polynucleotide of claim 1, wherein said polynucleotide  
comprises a sequence encoding at least one CS193 epitope.
5. A recombinant expression system comprising a nucleic acid sequence  
20 that includes an open reading frame derived from CS193 operably linked to a control  
sequence compatible with a desired host, wherein said nucleic acid sequence has at least  
50% identity to a sequence selected from the group consisting of SEQUENCE ID NOS  
1-18 and fragments or complements thereof.
- 25 6. A cell transfected with the recombinant expression system of claim 5.
7. A CS193 polypeptide having at least 60% identity with an amino acid  
sequence selected from the group consisting of SEQUENCE ID NOS 41-49, and  
30 fragments thereof.
8. The polypeptide of claim 7, wherein said polypeptide is produced by  
recombinant techniques.
9. The polypeptide of claim 7, wherein said polypeptide is produced by  
35 synthetic techniques.

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10. An antibody which specifically binds to at least one CS193 epitope, wherein said CS193 epitope is derived from an amino acid sequence having at least 50% identity to an amino acid sequence selected from the group consisting of SEQUENCE ID NOS 41-49, and fragments thereof.

11. A cell transfected with a nucleic acid sequence encoding at least one CS193 epitope, wherein said nucleic acid sequence is selected from the group consisting of SEQUENCE ID NOS 1-18, and fragments or complements thereof.

12. A method for producing a polypeptide comprising at least one CS193 epitope, said method comprising incubating host cells that have been transfected with an expression vector containing a polynucleotide sequence encoding a polypeptide, wherein said polypeptide comprises an amino acid sequence having at least 60% identity with an amino acid sequence selected from the group consisting of SEQUENCE ID NOS 41-49, and fragments thereof.

13. A method for producing antibodies which specifically bind to CS193 antigen, said method comprising administering to an individual an isolated immunogenic polypeptide or fragment thereof in an amount sufficient to elicit an immune response, wherein said immunogenic polypeptide comprises at least one CS193 epitope and has at least 50% identity with a sequence selected from the group consisting of SEQUENCE ID NOS 41-49, and fragments thereof.

14. A method for producing antibodies which specifically bind to CS193 antigen, said method comprising administering to an individual a plasmid comprising a polynucleotide sequence which encodes at least one CS193 epitope derived from a polypeptide having an amino acid sequence selected from the group consisting of SEQUENCE ID NOS 41-49, and fragments thereof.

15. A composition of matter comprising a CS193 polynucleotide or fragment thereof, wherein said polynucleotide has at least 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NOS 1-18, and fragments or complements thereof.

16. A composition of matter comprising a polypeptide containing at least one CS193 epitope, wherein said polypeptide has at least 60% identity with a sequence

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selected from the group consisting of SEQUENCE ID NOS 41-49, and fragments thereof.

5 17. A gene, or a fragment thereof, which codes for a CS193 protein comprising an amino acid sequence that has at least 60% identity with SEQUENCE ID NO 41.

10 18. A gene or fragment thereof comprising DNA having at least 50% identity with SEQUENCE ID NO 16, SEQUENCE ID NO 17, or SEQUENCE ID NO 18.

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